

Remarks/Arguments

Claims 1-79 were pending. Within the Office Action, claims 1-70, 72-79 are rejected under 35 U.S.C. § 103(a), and claim 71 is objected to. In the amendments made above, claims 1, 17, 49, and 76 have been amended and claims 116-118 have been added. Accordingly, claims 1-79 and 116-118 are now pending. The Applicants ask for reconsideration in light of the amendments made above and the arguments made below.

Claims 1-5, 7-70, and 72-79

Within the Office Action, claims 1-5, 7-70, and 72-79 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,839,751 to Dietz et al. in view of U.S. Patent Pub. No. 2005/0201302 to Gaddis et al. The Applicants respectfully traverse these rejections.

Dietz discloses a method of and an apparatus for monitoring a flow of packets passing through a connection point on a computer network. Dietz discloses storing statistical measures of flows. The statistical measures are used to determine metrics related to the flows. (Dietz, Abstract) As recognized in the Office Action, Dietz does not disclose using metrics to rearchitect an internetwork, as recited in the independent claims of the present invention. Nor does Dietz disclose using peer-to-peer communications to rearchitect an internetwork.

Gaddis is directed to methods of and systems for managing the routing of traffic within a network by developing a topological address space map of the network. In those paragraphs cited within the Office Action, Gaddis discloses grouping addresses into ranges (§ 56), compiling an address space map (§ 59), monitoring incoming traffic to determine the percentage of traffic that arrives on an interface (§ 70), determining in which address space an address is located (§ 71), and how granularity of prefixes is related to correctly determining this (§ 72). Nowhere in these paragraphs does Gaddis disclose altering a routing table in response to a calculation of a metric, as recited in claims 1 and 76 of the present invention. Nor does Gaddis disclose using peer-to-peer communications to rearchitect and internetwork.

Claim 1 is directed to a method of optimizing traffic in an internetwork. The method includes selecting a subset of flows in the internetwork for monitoring, wherein the subset of flows includes one of one flow, some flows, and all flows; measuring performance characteristics of the subset of flows in at least a portion of the internetwork, the performance characteristics including one or more of: a plurality of one or more round trip measurements for each of the subset of flows and a plurality of one or more one-way measurements for each of the subset of

flows, the measuring performance characteristics including one or more of: launching a first plurality of one or more packets, and measuring the first plurality of one or more packets; measuring a second plurality of one or more packets in the internetwork, wherein the second plurality of one or more packets were already launched; monitoring a first plurality of one or more flows in the internetwork, duplicating one or more packets from the plurality of one or more flows, and measuring the one or more duplicated packets; serving as a proxy hop for a second plurality of one or more flows, and measuring the second plurality of one or more flows; and encoding material within a third plurality of one or more flows, causing a fourth plurality of one or more flows to be generated, wherein the third plurality of one or more flows traverses a first path of the internetwork, and the fourth plurality of one or more flows traverses a second path of the internetwork, wherein at least a portion of the first path of the internetwork and at least a portion of the second path of the internetwork are equal, and measuring a subset of the fourth plurality of one or more flows; calculating at least one performance metric for the subset of flows in the at least a portion of the internetwork, the at least one performance at least partly determined from the measured performance characteristics; and in response to calculating the at least one performance metric, rearchitecting the internetwork to optimize one or more of the least one performance metric *using peer-to-peer communications*, rearchitecting the internetwork including at least one of: altering a plurality of one or more routing tables in the internetwork, wherein the plurality of one or more routing tables include at least one of: network-layer routing tables, layer 3 routing tables, IP routing tables, layer 2 forwarding tables, and MPLS forwarding tables; redirecting the subset of flows to a second internetwork coupled to the internetwork at one or more Points of Presence; and affecting forwarding decisions of the subset of flows, by imposing one or more of: NAT, GRE, and tunneling techniques other than GRE.

Peer-to-peer communications are disclosed throughout the Specification, such as at page 25, lines 8-22.

As explained above, neither Dietz, nor Gaddis, nor their combination discloses using peer-to-peer communications to rearchitect an internetwork, as recited in claim 1 of the present invention. For at least this reason, claim 1 is allowable over Dietz, Gaddis, and their combination.

Claims 2-5, 7-70, and 72-74 all depend on claim 1 and accordingly are all allowable as depending on an allowable base claim.

Claims 69 is allowable for additional reasons. Within the Office Action, it is stated that at column 17, lines 35-60, Dietz discloses duplicating packets and measuring one or more

duplicated packets. Dietz shows no such thing here. Instead, Dietz merely lists statistical operations performed by a calculator; describes aspects of flow; and flow counters and time stamps. Dietz says nothing about duplicating packets.

Claim 76 is a system claim corresponding to the method claim 1. Accordingly, claim 76 is allowable for at least the same reasons that claim 1 is allowable.

Claim 77 depends on claim 76 and, accordingly, is allowable as depending on an allowable base claim.

Claim 75 is directed to a method of optimizing traffic in an internetwork. Claim 75 recites, in part, “in response to calculating the at least one performance metric, affecting the routing of the subset of flows by altering a plurality of one or more DNS entries in the internetwork.” Dietz does not disclose altering DNS entries in this way. Within the Office Action, it is stated that Gaddis, at paragraphs 56, 59, and 70-72, discloses this element. As described in the explanation of these paragraphs above, Gaddis does not disclose altering DNS entries. For at least this reason, claim 75 is allowable over Dietz, Gaddis, and their combination.

Claim 78 is a system claim corresponding to the method claim 75. Accordingly, claim 78 is allowable for at least the same reasons that claim 75 is allowable.

Claim 79 depends on claim 78 and, accordingly, is allowable as depending on an allowable base claim.

Claims 6 and 49

Within the Office Action, claims 6 and 49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dietz and Gaddis in view of U.S. Patent No. 6,522,627 to Mauger. The Applicants respectfully traverse these rejections.

Mauger discloses using user tunnels across a network, thereby providing end-to-end connectivity without the need for individual packet routing at intermediate network nodes. (Mauger, Abstract) Mauger, like Dietz and Gaddis, does not disclose using peer-to-peer communications to rearchitect an internetwork, as recited in claim 1. For at least this reason, claim 1 is allowable over Dietz, Gaddis, Mauger, and their combination. Because claims 6 and 49 both depend on claim 1, they are both allowable as depending on an allowable base claim.

The new claims 116-118 do not include new matter.

The new claims find support in the application as filed. The new claim 116 finds support in the application at page 7, lines 30-31; the new claim 117 finds support at page 49, lines 12-18; and the new claim 118 finds support at page 50, lines 1-5.

Claims 116-118 all depend on claim 1. As explained above, claim 1 is allowable. Accordingly, claims 116-118 are also all allowable as depending on an allowable base claim.

Allowable Subject Matter

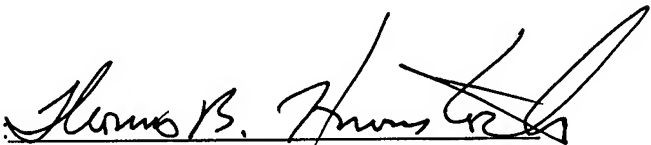
Within the Office Action, it is stated that claim 71 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Claim 71 is directly dependent on claim 1, which is allowable. Accordingly, claim 71 is allowable as depending on an allowable base claim.

CONCLUSION

The Applicants believe that claims 1-79 and 116-118 are all in condition for allowance, and allowance at an early date would be appreciated. If the Examiner has any questions or comments, he is invited to call the undersigned at (408) 530-9700 so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: 5-8-07

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CERTIFICATE OF MAILING (37 CFR § 1.8(a))
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